ZHDANOV, S., kand.tekhn.nauk; YEVSEYEV, A., inzh.; SMIRNOV, A., inzh.

New radio stations (to be continued). Pozh.delo 8 no.3:25-26
Mr. '62. (MIRA 15:4)
(Radio broadcasting) (Fire departments—Equipment and supplies)

ZHDANOV, S., kand.tekhn.nauk; YEVSEYEV, A., inzh.; SMIRNOV, A., inzh.

New types of radio stations. Pozh.delo 8 no.5:21 My '62.
(MIRA 15:5)

(Fire departments--Equipment and supplies)
(Radio, Short wave--Transmitters and transmission)

ZHDANOV, S., kand.tekhn.nauk; SMIRNOV, A., inzh.

Automatic information by means of the "01" dial. Pozh.delo 8 no.11:22-23 N '62. (MIRA 15:11)

(Fire alarms)

1. ZHDANOV, S.

2. USSR (600)

4. Landscape Gardening

7. Blooming Altai plants should be used in city parks. Zhil. -kom. khoz. 2, No. 12, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

ZHDANOV, S., kand.tekhn.nauk; MAKAROV, V., inzh.

Automatically controlled differential fire detector.
Pozh.delo 5 no.12:23-24 D '59. (MIRA 13:4)
(Fire prevention--Equipment and supplies)

1. ZHDANOV, S.

2. USSR (600)

4. Altai Territory - Plants

7. Blooming Altai plants should be used in city parks. Zhil. -kom. khoz. 2, no. 12, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1953, Uncl.

1. ZHDANOV, S.

2. USSR (600)

4. Plants - Altai Territory

7. Blooming Altai plants should be used in city parks. Zhil.-kom. khoz. 2, No. 12, 1952.

9. *Monthly List of Russian Accessions*, Library of Congress, May 1953. Unclassified.

ZHDANOV, S., kand.tekhn.nauk; MAKAROV, V., inzh.

"Plamia" automatic fire alarm apparatus. Pozh.delo 6 no.5:22-23 My '60. (MIRA 13:8)

(Fire alarms)

ZHDANOV, S., kand.tekhn.nauk; MAKAROV, V., inzh.

Automatic SPTU-1 fire alarm system. Pozh.delo 7 no.6:20-21 Je '61.
(MIRA 14:6)

(Fire alarms)

S/137/61/000/006/052/092
A006/A101

AUTHORS: Batist, A.I., Zhdanov, S.A., El'bert, S.M.

TITLE: Development and assimilation of a technology for manufacturing capillary "10" grade steel tubes of 1.0 x 0.1 mm dimension

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 6, 1961, 37, abstract 6D302 ("Byul. nauchno-tekhn. inform. Ukr. n.-i. trubn. in-t", 1959, no. 6 - 7, 209 - 215)

TEXT: Drawing of tubes with a hollow head (jug - "kuvshintchik") is performed by 7 passes: 4 passes on a long mandrel, and 3 passes without a mandrel. The mean coefficient of extrusion during drawing on a long mandrel was 2.00 and 1.38 without a mandrel. It was established that the formation of "pinchers" during mandrelless drawing was caused not so much by high deformation as by the conditions of the rolls and the quality of burnishing the tubes. To eliminate obstruction in the tubes, they were blown through with compressed air after the last annealing process.

V. Pospekhov

[Abstracter's note: Complete translation]

Card 1/1

ZHDANOV, S.

[redacted] Raising the qualification of industrial relations personnel in the Economic Council of Moscow Province. Sots. trud. no.9:145-146 '58. (MIRA 11:10)

(Moscow Province--Economic councils)
(Industrial relations)

ZHDANOV, S.I

[illegible]

[illegible] OII are formed when I is reduced [illegible]

ZABANOV, S.I.

**ZHDANOV, S. I.**

USSR/Physics

Card 1/1

Authors : Frumkin, A. N., Academician, and Zhdanov, S. I.

Title : Origination of sudden changes in current intensity and hysteresis loop on polarization curves during electro-reduction reaction

Periodical : Dokl. AN SSSR, 96, Ed. 4, 793 - 796, June 1954

Abstract : During the reduction of $NO_3^-$ and $NO_2^-$ ions on a mercury drop electrode in the presence of $La^{3+}$, an intermittent increase in the current intensity may be observed when a certain potential is reached. The anomalous form of the polarization curves is due to the autocatalytic effect of $OH^-$, formed during the reduction of ions. An approximate theory of these phenomena is given. The hysteresis loop is best expressed at $P_H^C = 3 - 4$ and disappears at a much higher acidification and alkalization. Three references. Graphs.

Institution : ...

Submitted : April 7, 1954

ZHDANOV, S. I.

**USSR/** Chemistry - Physical chemistry

**Card** 1/1 : Pub. 22 - 29/48

**Authors** : Frumkin, A. N., Academician, and [illegible]

**Title** : Reduction of a nitrate-ion [illegible] the presence of La

**Periodical** : Dok. AN SSSR 97/5, 867-870, August 11, 1954

**Abstract** : The phenomena observed during the reduction of a nitrate-ion, i. e., in conditions when the reacti[illegible] in the near-electrode layer cannot transform into [illegible] because of the continuing reaction [illegible], are [illegible] in acid [illegible] followed [illegible] and [illegible] The final product of N [illegible] reduction [illegible] the presence of $La^{3+}$ [illegible] is in the form of a $NH_4^+$ [illegible] (1951-1954). Graphs.

**Institution** : ...

**Submitted** : June 16, 1954

ZHDANOV, S.I.; ZYKOV, V.I.

Microcoulometric determination of the number of electrons involved in electrochemical reactions. Trudy Inst. fiz. khim. no.6:29-38 '57. (MIRA 11:10)

(Electrochemistry) (Electrons)

[illegible]

[illegible]

VOL'PIN, M.Ye.; ZHDANOV, S.I.; KURSANOV, D.N.

New tropilium salts. Tropilium ion polarography. Dokl. AN SSSR 112 no.2:264-266 Ja '57. (MLRA 10:4)

1. Chlen-korrespondent AN SSSR (for Kursanov). 2. Institut elementoorganicheskikh soyedineniy i Institut fizicheskoy khimii Akademii nauk SSSR.
(Cycloheptatrienyl)

ZHDANOV, S. I.

"Polarography of Trophyliumions,"

paper presented at a Colloquium on Polarography, 3-7 June 1957, at Erich Muller-Inst for Electrochemistry and Physical Chemistry in the Technischer Hochschule Dresden.

Chemische Technik, No. 1, Jan 1958.

**AUTHOR:** Zykov, V. I., Zhdanov, S. I. 76-32-3-23/43

**TITLE:** The Reduction of the $BrO_3^-$ Anion on the Dropping-Mercury Electrode (Vosstanovleniye aniona $BrO_3^-$ na kapel'nom rtutnom elektrode).
I. The Polarography of $BrO_3^-$ in the Presence of Monovalent Cations at Various pH Values (I. Polyarografiya $BrO_3^-$ v prisutstvii odnozaryadnykh kationov pri razlichnykh pH)

**PERIODICAL:** Zhurnal Fizicheskoy Khimii, 1958, Vol. 32, Nr 3, pp. 644-653 (USSR)

**ABSTRACT:** In the investigations performed by Orleman and Kolthoff (reference 2), the observations made were not explained, whereas the explanation of the distorted polarization curves by the expression "water waves" is to be considered wrong. M. G. Kozlovskiy et al (reference 4) calculated n for the reduction of $BrO_3^-$ in the presence of bivalent cations, according to the formula by Il'kovich, and obtained the result that n varies between 3 and 6. From the experimental data of the present paper it follows that the

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The Reduction of the $BrO_3^-$ Anion on the Dropping-Mercury Electrode. 76-32-3-23/43
I. The Polarography of $BrO_3^-$ in the Presence of Monovalent Cations at Various pH Values

authors polarographed with visual reading. A capillary with a circular passage was used and the current intensity was measured with a galvanometer of a maximum sensitivity of $3.5 \cdot 10^{-8}$. The investigations were performed at 25°C in neutral, alkaline and acid media. From the given investigation results follows that in neutral and alkaline solutions $n = 6$, whereas $\varphi\ 1/2$ in the order $Li^+ \dashrightarrow Cs^+$ becomes more positive, at the same concentration of the indifferent electrolyte. An addition of gelatine to the solution independent of pH brings about a change of $\varphi\ 1/2$ to negative values. The reduction velocity of $BrO_3^-$ in neutral, acid and alkaline solutions is independent of pH. According to the obtained results for $\varphi\ 1/2$ $BrO_3^-$ does not depend on the concentration of $BrO_3^-$ indicating a first order reaction. Reference is made to the more exact significance of $\Psi$, according to the explanation by A. N. Frumkin (references 7,8), where a derivation according

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The Reduction of the $BrO_3^-$ Anion on the Dropping-Mercury Electrode. 76-32-3-23/43
I. The Polarography of $BrO_3^-$ in the Presence of Monovalent Cations at Various pH Values

to the theory of the binary electric layer of diffusion is performed. An increase in the reduction velocity in the series $Li^+ \dashrightarrow Cs^+$ was observed in $S_2O_8^{-2}$ by N. V. Nikolayeva and B. B. Damaskin (reference 10) and reported on the occasion of the electrochemical conference in May 1956 in Vil'nys. In a further test series, it was determined that when pH∼4, further acidification changes the reaction mechanism and thus other polarization curves occur, which was also observed on a further addition of $BrO_3^-$ solution. From this, it is concluded that the kinetic equation of reaction must contain a value which expresses the connection of the reaction velocity with the concentration of $H^+$ ions. It is assumed that in acid solutions the nondissociated $HBrO_3$ molecules decompose. , However, another interpretation according to Rylich (ref 1) is also cited. Finally the authors thank A. N. Frumkin, Member of the Academy of Sciences, USSR.

Card 3/4

The Reduction of the $BrO_3^-$ Anion on the Dropping-Mercury Electrode. 76-32-3-23/43
I. The Polarography of $BrO_3^-$ in the Presence of Monovalent Cations at Various pH Values

There are 7 figures, 2 tables, and 12 references, 8 of which are Soviet.

ASSOCIATION: Akademiya nauk SSSR, Institut fizicheskoy khimii, Moskva (AS USSR Institute of Physical Chemistry, Moscow)

SUBMITTED: November 28, 1956

Card 4/4

AUTHORS: Zykov, V. I., Zhdanov, S. I. 76-32-4-10/43

TITLE: The Reduction of the Bromate Anion at the Dropping Mercury Electrode (Vosstanovleniye bromat-aniona na kapel'nom rtutnom elektrode) II. The Influence of Temperature on the Reduction Kinetics of the Bromate Anion in Neutral and Alkaline Medium (II. Vliyaniye temperatury na kinetiku vosstanovleniya bromat-aniona v neytral'noy i shchelochnoy srede)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1958, Vol. 32, Nr 4, pp. 791-796 (USSR)

ABSTRACT: The investigations are continuing a previous paper and the author mentions in the present work the results of the investigations mentioned in the title carried out with $Li^+$, $Rb^+$, $Cs^+$, $(CH_3)_4N^+$, $Ca^+$, $Ba^{+2}$ at from $5^\circ$ to $65^\circ C$. Several investigations of the temperature influence on similar reactions have already been carried out, as there are, for instance, the works by Nejedly (reference 2),

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The Reduction of the Bromate Anion at the Dropping Mercury Electrode. II. The Influence of Temperature on the Reduction Kinetics of the Bromate Anion in Neutral and Alkaline Medium 76-32-4-10/43

Kametskiy and Sutskiy (reference 3), Delahay and Mattax (reference 4), Kuta (reference 5) as well as by N. V. Nikolayeva and G. Furazhkova (reference 8). From the experimental data of this work can be seen that the method of operation corresponded to that of the previous work, and that some explanations of the calculation of results mentioned graphically and on tables are given. It was observed that in the case of a raise of temperature the limit current of the $BrO_3$ reduction increases, with the temperature coefficient varying per degree from 0,25 to 1,34%, and the semiwave potential becoming more negative. The first is in accordance with the equation by Il'kovich, while the influence of temperature on the reduction velocity of the $BrO_3$ ion decreases at the background of univalent cations, while it increases with bivalent ones. Finally the authors thank A. N. Frumkin, Member of the Academy. There are 4 figures, 1 table, and 13 references, 9 of which are Soviet.

Card 2/3

The Reduction of the Bromate Anion at the Dropping Mercury Electrode. II. The Influence of Temperature on the Reduction Kinetics of the Bromate Anion in Neutral and Alkaline Medium 76-32-4-10/43

ASSOCIATION: Akademiya nauk SSSR, Institut fizicheskoy khimii (Physico-chemical Institute, AS USSR)

SUBMITTED: June 28, 1956

AVAILABLE: Library of Congress

1. Bromate ions--Properties 2. Bromate ions--Temperature factors

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5(4)

SOV/20-122-3-25/57

AUTHORS: Zhdanov, S. I., Frumkin, A. N., Academician

TITLE: The Polarography of the Tropylium Ion (Polyarografiya iona tropiliya)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 3, pp 412-415 (USSR)

ABSTRACT: The polarogram of the tropylium ion ($C_7H_7^+$) on the background of LiCl contains 3 waves the third of which ($\varphi_{1/2} \sim -1,5$ V) corresponds to the discharge of $H^+$ ions produced by the hydrolysis of the tropylium salt. This paper deals with the nature of the other waves. Tropylium perchlorate was used as initial material for these investigations.

For $[C_7H_7^+] < 3.10^{-4}$ M, the polarogram contains only the first wave with $\varphi_{1/2} \sim -0,30$ V. The following mechanism of the restoration of $C_7H_7^+$ is the most probable one:

Card 1/3 $C_7H_7^+ + e \longrightarrow \dot{C}_7H_7$ (radical); $2\dot{C}_7H_7 \longrightarrow C_7H_7 - C_7H_7$ (ditro-

pylium). This conclusion is confirmed also by the results of other papers (Ref 2). According to the comparison of the polarization curve and of the electrocapillary curve of tropylium, the $C_7H_7^+$ ions are reduced in the adsorbed state. Under such conditions, the discharge of the tropylium ion is an analogon to the discharge of metallic cations, which are attached to a metal lattice. The increase of the first wave stops if $\left[C_7H_7^+\right] \sim 3.10^{-4}$ M. A further increase of $\left[C_7H_7^+\right]$ causes the occurrence of the second wave with $\varphi_{1/2} \sim -0,7$ V. For the potentials of the second wave, the process remains a one-electron process. The properties of the adsorption waves of tropylium are essentially different from those of the Brdichka waves. Also the neutral molecules of some organic compounds and even cations (for instance, the very ions of tropylium at sufficiently high concentrations) have similar properties. Substances of lower surface tension which are adsorbed more intensely than ditropylium, prevent the formation of an adsorption layer of ditropylium. The authors thank M. Ye. Vol'pin who placed the preparation of tropylium perchlorate at their disposal. The electrocapillary curves

(Fig 1) were plotted by M. A. Gerovich (deceased) and N. S. Polyanovskaya (Kafedra elektrokhimii Moskovskogo universiteta (Chair of Electrochemistry, Moscow University)). There are 4 figures and 17 references, 4 of which are Soviet.

SUBMITTED: July 19, 1958

FRUMKIN, A.N., akademik, otv.red.; YESIN, O.A., prof., red.; ZHDANOV, S.I., red.; KABANOV, B.N., prof., red.; KOLOTYRKIN, Ya.M., dokt.khim. nauk, red.; LOSEV, V.V., red.; LUKOVTSEV, P.D., prof., red.; SOLOV'YEVA, Z.A., red.; STENDER, V.V., prof., red.; FLORIANOVICH, G.M., red.; YEGOROV, N.G., red.izd-va; PRUSAKOVA, T.A., tekhn.red.

[Proceedings of the 4th Conference on Electrochemistry, October 1-6, 1956] Trudy 4-go soveshchaniia po elektrokhimii, 1-6 oktiabria 1956 g. Moskva, Izd-vo Akad.nauk SSSR, 1959. 867 p. (MIRA 12:5)

1. Soveshchaniye po elektrokhimii, 4th, Moscow, 1956.
(Electrochemistry)

ALEKPEROV, A. I.; ZHDANOV, S. I.

Effect of anions on the reduction of uranyl ions on the dropping mercury electrode. Zhur. neorg. khim. 5 no.8:1743-1747 Ag '60.
(MIRA 13:9)

(Uranyl compounds) (Reduction, Electrolytic)

ZHDANOV, S.I.

"Electronic polarographs" by S.B.TSfasman. Reviewed by S.I.Zhdanov. Zav.lab. 26 no.6:777 '60. (MIRA 13:7)

(Polarograph) (TSfasman, S.B.)

**ZHDANOV, S.I.**

Polarography of nitrates. Zhur. fiz. khim. 34 no.4:928-930 Ap '60. (MIRA 14:5)

(Nitrates) (Polarography)

S/076/60/034/008/038/039/XX
B015/B063

AUTHORS: Lyu Shou-zhun, Budov, G. M., and Zhdanov~~, S. I.~~

TITLE: Discharge of Lanthanum Ions on a Mercury Cathode

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 8, pp. 1885-1886

TEXT: The explanations given in publications for the mechanism of ion discharge of multivalent elements, such as rare earths, are contradictory. Ref. 10 has shown that amalgams are obtained in high yields by electrolysis of aqueous solutions of rare-earth salts with strong complex-forming substances. The preparation of amalgams of these elements is difficult since these amalgams produce hydrogen from water on account of their high activity, and the salt is hydrolyzed. As the mercury phase plays the decisive role in these electrolytic processes, the presence of lanthanum in this phase during the electrolysis of aqueous solutions of lanthanum salts was studied by the method of tagged atoms and with the help of a mercury cathode. A method worked out for the measurement of the exchange current on amalgams (Ref. 10) was used to prepare amalgams and

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Discharge of Lanthanum Ions on a Mercury Cathode

S/076/60/034/008/038/039/XX
B015/B063

determine their concentration. The electrolysis of lanthanum-chloride solutions tagged with $La^{140}$, which had different concentrations, was performed in the upper cell. Solution and mercury (cathode) were intermixed with pure nitrogen, the cathode potential being kept at - 2.1 v. After the threefold amount of current required for a complete precipitation of lanthanum, had been passed through, part of the mercury was conveyed into the lower cell without interrupting electrolysis. The mercury was treated with a 0.1 N HCl solution, after which the activity of the solution was measured. Results of measurement indicate that lanthanum amalgam is produced only in a small quantity (below 0.1% current yield). Thus, it has been proved that under the present conditions, lanthanum amalgam can be obtained in a very small quantity. Ya. P. Stradin' and L. K. Lepin' are mentioned. There are 11 references: 4 Soviet, 2 US, 2 German, 2 Czechoslovakian, and 1 British.

ASSOCIATION: Akademiya nauk SSSR Institut elektrokhimii
(Academy of Sciences USSR, Institute of Electrochemistry)

SUBMITTED: April 5, 1960

Card 2/2

ZHDANOV, S. I.; MIRKIN, L. S.

Polarography of pyridine cyclopentadienylide. Coll Cz chem 26
no.2:370-379 F '61. (EEAI 10:9)

1. Institut elektrokhimii, Moskovskiy universitet, Moskva, SSSR.

(Polarograph and polarography) (Pyridinium compounds)
(Cyclopentadiene)

ZHDANOV, S.I.; POLIYEVKTOV, M.K.

Polarography of diphenylcyclopropenone. Zhur.obkhim. 31 no.12:3870-3873 D '61. (MIRA 15:2)

1. Institut elektrokhimii AN SSSR.
(Propenone)

ZHDANOV, S.I.

Polarography of diethylaminoethylthiol. Zhur.ob.khim. 31 no.12:3874-3877 D '61. (MIRA 15:2)

1. Institut elektrokhimii AN SSSR.
(Thiols)
(Polarography)

FEOKTISTOV, L. G.; ZHDANOV, S. I.

Polarography of halogen organic compounds. Report No. 1: Monoelectronic splitting of a carbon-halogen bond and polarographic behavior of some propionitrile halides. Izv. AN SSSR Otd. khim. nauk no.12:2127-2132 D '62.
(MIRA 16:1)

1. Institut elektrokhimii AN SSSR.

(Propionitrile) (Halogen compounds)
(Polarography)

YEZHOV, V.D.; ZHDANOV, S.I.

Cyclic voltammetry with the PE-312 electron polarograph.
Zav. lab. 28 no.9:1058-1060 '62. (MIRA 16:6)

1. Institut elektrokhimii AN SSSR.
(Polarography)

S/020/62/143/004/022/027
B101/B138

AUTHOR: Zhdanov, S. I.

TITLE: Autocatalytic mechanism of electrodic processes in nonbuffered lanthanum chloride solutions

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 4, 1962, 902-904

TEXT: M. Heyrovský's statement (Coll. Czechoslov. Chem. Commun., 25, 3120 (1960)) that autocatalysis takes place with nonbuffered $AlCl_3$ solutions, was tested on 0.1 M $LaCl_3$ solutions. Cathodic and anodic polarization was applied using a modified ПЭ-312 (PE-312) polarograph (Zav. lab. 28, (printing)) which permits rapid pole reversal. It was found that (1) the polarograms exhibit an abrupt rise in amperage as well as hysteresis loops, indicating an autocatalytic mechanism; (2) the oscillographic i, t curves ($2 \cdot 10^{-3}$ M $LaCl_3$ in 0.1 M LiCl) show this even more clearly, and at concentrations for which nothing was revealed in the polarograms; (3) further

Card 1/2

confirmation was provided by polarograms taken with a high ohmic resistance (15,000 ohms) connected in series. Negatively sloping lengths appeared at HCl concentrations of $1 \cdot 10^{-3} - 2 \cdot 10^{-3}$. They do not occur at higher HCl concentrations as the solution near the electrode no longer is alkalized. Two possible mechanisms are suggested: (a) lanthanum ions are discharged, and a lanthanum amalgam is formed, which reacts with $H_2O$ with liberation of $H_2$. This alkalizes the solution near the electrode and changes the state and speeds up the discharge of lanthanum ions; (b) the presence of lanthanum ions promotes the discharge of $H_2O$ and the liberation of $H_2$. There are 3 figures.

ASSOCIATION: Institut elektrokhimii Akademii nauk SSSR (Institute of Electrochemistry of the Academy of Sciences USSR)

PRESENTED: December 13, 1961, by A. N. Frumkin, Academician

SUBMITTED: December 13, 1961

KUZINA, A.F.; ZHDANOV, S.I.; SPITSYN, Vikt.I., akademik

Polarography of technetium in perchlorate solutions. Dokl. AN SSSR 144 no.4:836-839 Je '62. (MIRA 15:5)

1. Institut fizicheskoy khimii AN SSSR.
(Technetium) (Polarography)

FEOKTISTOV, L.G.; ZHDANOV, S.I.

"Electrochemical Behaviour of β-Halogenpropionitryls."

Report presented at the 14th meeting CITCE, Intl. Comm. of Electrochemical Thermodynamics and Kinetics, Moscow, 19-25 Aug 63.

Institute of Electrochemistry, Academy of Sciences of U.S.S.R., Moscow.

FEOKTISTOV, L. G.; ZHDANOV, S. I.

Polarography of halogen organic compounds. Report No. 2: Establishing the stoichiometry of reactions by means of latent limiting currents. Izv. AN SSSR, Otd. khim. nauk no.1:45-52 '63. (MIRA 16:1)

1. Institut elektrokhimii AN SSSR.

(Halogen organic compounds) (Polarography)

ZHDANOV, S. I.; FEOKTISTOV, L. G.

Problem of the reducing dimerization of acrylonitrile on a mercury electrode. Izv. AN SSSR. Otd. khim. nauk no.1:53-57 '63. (MIRA 16:1)

1. Institut elektrokhimii AN SSSR.

(Acrylonitrile) (Polymerization)
(Reduction, Electrolytic)

ZHDANOV, S.I.

Shape of polarization curves in the autocatalytic reduction of anions. Zhur.fiz.khim. 37 no.2:387-395 F '63.
(MIRA 16:5)

1. Institut elektrokhimii AN SSSR.
(Anions) (Reduction, Electrolytic)
(Polarography)

LYU SHOU-ZHUN [Liu Shou-jung]; ZHDANOV, S.I.

Reduction of anions on the dropping mercury cathode in the presence of small amounts of lanthanum ions. Zhur.fiz.khim. 37 no.8: 1750-1756 Ag '63. (MIRA 16:9)

1. Institut elektrokhimii AN SSSR, Moskva.

(Nitrates) (Reduction, Electrolytic)
(Electrodes, Dropping mercury)
(Lanthanum catalysts)

ZHDANOV, S. I.; KISELEV, B.

"Photography of sulphide-ion."

report submitted for 3rd Intl Polarography Cong, Southampton, 19-25 Jul 64.

POZDEYEVA, A. G.; ZHDANOV, S. I.

"Polarography of tropon and 2, 3-dimethyl-7-benzotropon."

report submitted for 3rd Intl Polarography Cong, Southampton, 19-25 Jul 64.

ZHDANOV, S. I.

"The electrochemistry of non-benzoid aromatic compounds."

report submitted for 10th Anniv Festivities, Leuna-Merseburg Tech Inst for Chemistry, Leuna-Merseburg, E. Germany, 2-7 Nov 64.

ZHDANOV, S.I.; KISELEV, B.A.

Some properties of mercury sulfide films on the surface of a mercury electrode. Dokl. AN SSSR 155 no. 3:651-653 Mr '64. (MIRA 17:5)

1. Institut elektrokhimii AN SSSR. Predstavleno akademikom A.N.Frumkinym.

ZHDANOV, S.I.

Polarography of halogenorganic compounds. Report No.3: Polarography of $\alpha$-1,2,3,4,5,6-hexabromocyclohexane and p-diiodobenzene. Izv. AN SSSR. Ser. khim. no.6:966-971 Je '64. (MIRA 17:11)

1. Institut elektrokhimii AN SSSR.

KISELEV, B.A.; ZHDANOV, S.I.

Adsorption of sulfide ions at the mercury - solution interface. Elektrokhimiia 1 no.2:159-163 F '65. (MIRA 18:6)

1. Institut elektrokhimii AN SSSR i Institut organicheskoy khimii Bashkirskogo universiteta.

ZHDANOV, S.I.; PATS, R.G.

Polarography of tellurium. Part 2: Hexavalent tellurium. Elektrokhimiia 1 no.9:1092-1096 S '65. (MIRA 18:10)

1. Gosudarstvennyy institut tsvetnykh metallov.

KISELEV, B.A.; ZHDANOV, S.I.

Hydrogen sulfide adsorption on mercury. Elektrokhimiia 1 no.12:1494-1497 D '65. (MIRA 19:1)

1. Institut elektrokhimii AN SSSR. Submitted March 31, 1965.

ISABEKYAN, S.Ye.; ZHDANOV, S.I.

Polarography of diiodoacetylene. Izv. AN SSSR. Ser. khim. no.3:534-536 '65. (MIRA 18:5)

1. Institut elektrokhimii AN SSSR.

KISELEV, B.A.; ZHDANOV, S.I.

Polarography of solutions containing elementary sulfur and bivalent iron present together. Izv. AN SSSR. Ser. khim. no.6:985-989 '65. (MIRA 18:6)

1. Institut elektrokhimii AN SSSR.

ZHDANOV, S.I.; PATS, R.G.

Polarography of tellurium. Part 1: Tetravalent tellurium. Elektrokhimiia 1 no.8:947-954 Ag '65. (MIRA 18:9)

1. Gosudarstvennyy institut tsvetnykh metallov i Institut elektrokhimii AN SSSR.

CZECHOSLOVAKIA

ZHDANOV, S. I.; POZDEEVA, A. A.

Institute of Electrochemistry, USSR Academy of Sciences (Institut elektrokhimii, Akademiia nauk SSSR), Moscow (for both)

Prague, Collection of Czechoslovak Chemical Communications, No 12, December 1965, pp 4143-4149

"On the mechanism of the reduction of tetraphenylcyclopentadine on a mercury drop electrode."

NIKOLAYEV, O.V.;MEN'SHIKOV, V.V.; KALININ, A.P.; ZHDANOVA, S.M.;
BOL'SHAKOVA, T.D.; GERASIMENKO, P.P.; CHURILOVA, A.I.,
red.

[Pheochromocytoma] Feokhromotsitoma. [By] O.V.Nikolaev
i dr. Moskva, Meditsina, 1965. 235 p. (MIRA 18:2)

ZHDANOV, Sergey Mikhaylovich, kand.tekhn.nauk; MAKAROV, Viktor Matveyevich; SHESTAKOV, Aleksandr Leonidovich; POLUKHIN, V.P., red.; KOROGODIN, A.S., red.izd-va; NAZAROVA, A.S., tekhn.red.

[Automatic fire-protective signaling system] Avtomaticheskaia pozharnaia signalizatsiia. Moskva, Izd-vo M-va kommun. khoz.RSFSR, 1960. 159 p. (MIRA 14:2)

(Fire alarms)

ZHDANOV, S.M. (5)

IVANOV, V. Ye., ZELENSKIY, V. F., FAYFER, S. I., ZHDANOV, S. M.,
MAKSIMENKO V. I., SAVCHENKO V. I.,

"Magnesium Cermets and Magnesium-Beryllium Alloys

Report submitted for the Conference on New Nuclear Materials Technology including Non-Metallic Fuel Elements (IAEA), Prague, 1-5 July 1963

ZHDANOV, S.M., kand.tekhn.nauk; MAKAROV, V.M., inzh.

Infrared rays and their use in fire alarm systems. Inform.zbor.
TSNIPPO no.3:112-122 '59. (MIRA 14:3)
(Infrared rays--Industrial applications)(Fire alarms)

ZHDANOV, S.M., inzhener.

[redacted]

Automatic and remote control in traction substations. Zhel.dor. transp. 38 no.10:18-21 O '56. (MLRA 9:11)

(Electric railroads--Substations)

ZHDANOV, S.M.; MAKAROV, V.M.; KHAYKIN, M.S.

Signaling instrument for detecting weak ultraviolet light. Prib. i tekh.eksp. no.3:93-96 My-Je '57. (MIRA 10:9)

1. TSentral'nyy nauchno-issledovatel'skiy institut protivopozharnoy oborony.
(Electronic instruments) (Fire prevention) (Ultraviolet rays)

120-3-27/40

AUTHORS: Zhdanov, S.M., Makarov, V.M. and Khaykin, M.S.

TITLE: An Instrument for the Signalization of the Appearance of Weak Ultraviolet Light (Pribor dlya signalizatsii poyavleniya slabogo ul'trafioletovogo sveta)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, Nr 3, pp.93-96 (USSR)

ABSTRACT: The instrument responds to ultraviolet light in the range $\lambda$ = 2000-3000 Å. The sensitive element is a photon counter CФK-1 and the electronic circuit is completely transistorised. The instrument consists of a sensitive element, an electronic circuit and a relay. The counter has a pure copper photocathode having a sharp cutoff at about 3000 Å. The envelope of the counter is made of quartz glass which is transparent to UV for $\lambda >$ 2000 Å. Preliminary experiments have shown that the counter CФK-1 is highly sensitive to radiation from an open flame but has a negligible sensitivity to scattered visible light in a normally illuminated room. In these conditions the counting rate from visible light was about 200 counts per minute while the count rate due to a flame 25 mm high produced by a candle at a distance of 10 meters gave a counting rate of 6000 counts per minute, (Fig.1). The electronic circuit is designed so that it will

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120-3-27/40

An Instrument for the Signalization of the Appearance of Weak Ultraviolet Light.

give a signal on the appearance of fire when the count rate due to it is 30 times the background. The circuit consists of an amplifier, pulseshaper, DC amplifier and a sensitivity adjustment. The circuit is shown in Figs.2-4. The instrument has been produced for operation either from the mains or a battery. The size of the instrument is 225 x 120 x 65 $mm^3$ (Fig.5). The following persons collaborated: P.P. Zaytsev, N.A.Selitrennikov and A.I.Shal'nikov. There are 6 figures, no tables and 3 references, 2 of which are Russian and 1 English.

ASSOCIATION: Central Scientific Research Institute of Fire Prevention (Tsentral'nyy nauchno-issledovatel'skiy institut protivopozharnoy oborony )

SUBMITTED: January 16, 1957.

AVAILABLE: Library of Congress.

Card 2/2 1. Light ultraviolet-Detection 2. Instrumentation-Operation

ZHDANOV, S.M.; VARVARIN, G.B.

Use of piezoelectric transducers in detecting slides on the rolling surfaces of car wheels. Izv. SO AN SSSR no.6 Ser. tekh. nauk no.2:104-111 '64. (MIRA 17:10)

1. Institut avtomatiki i elektrometrii Sibirskogo otdeleniya AN SSSR i Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR, Novosibirsk.

POZDEYEVA, A.A.; ZHDANOV, S.I.

Microcoulometric study of the reduction of tropone, 2,7-dimethylbenzotropone, and azulene on the dropping mercury electrode. Izv. AN SSSR Ser. khim. no.12:2156-1259 D '64
(MIRA 18:1)

1. Institut elektrokhimii AN SSSR.

L 09378-67 EWT(m)/EWP(w)/EWP(t)/ETI IJP(c) JH/JW/JD

ACC NR: AT6026916 (A) SOURCE CODE: UR/0000/66/000/000/0163/0166

AUTHOR: Ivanov, V. Ye.; Zelenskiy, V. F.; Savchenko, V. I.; Fayfer, S. I.; 54
Zhdanov, S. M. 51

ORG: None

18 18 27

TITLE: Internal friction in powder metal magnesium

SOURCE: AN SSSR. Institut metallurgii. Vnutrenneye treniye v metallakh i splavakh (Internal friction in metals and alloys). Moscow, Izd-vo Nauka, 1966, 163-166

TOPIC TAGS: internal friction, powder metal, shear modulus, magnesium, vibration measurement

ABSTRACT: Powdered magnesium was oxidized to obtain samples with differing amounts of MgO (0.3, 2.3 and 5% by weight), annealed at 500°C for one hour, and subjected to measurement of change in vibration amplitude in order to determine internal friction ($Q^{-1}$), as well as shear modulus with respect to temperature. There are fairly consistent data on the curves for the three alloys with respect to strength (mechanical) properties, increasing or decreasing, as the case may be, with respect to MgO content. The path of curves for the temperature relationship of internal friction and shear modulus can be explained by dispersion hardening effect found in MgO. Grain boundaries, type of impurities and distribution of impurities in the

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L 09378-67

ACC NR: AT6026916

3

alloy also influences the internal friction. For purposes of comparison the relationship of $Q^{-1}(T)$ is presented for technical magnesium MG-1, which had been hot pressed, where it is evident that the height of the peak for $Q^{-1}(T)$ differs little from the peak for MG-1, increasing but slightly for increased MgO content. This may be caused by a structural refinement in alloys containing a large amount of the finely dispersed oxide phase, plus high degrees of distortions and increased numbers of defects in the polycrystalline structure. Orig. art. has: 6 figures.

SUB CODE: 11 / SUBM DATE: 02 Apr 66/ ORIG REF: 007/OTH REF: 001

Card 2/2

IVANOV, V.Ye.; ZELENSKIY, V.F.; FAYFER, S.I.; ZHDANOV, S.M.; MAKSIMENKO, V.I.;
SAVCHENKO, V.I.

Ceramic metal magnesium and magnesium beryllium alloys. Porosh. met. 5 no.5:46-53 My '65. (MIRA 18:5)

1. Fiziko-tekhnicheskiy institut AN UkrSSR, Khar'kov.

ZHDANOV, S.P.; KISELEV, A.V.; NOVIKOVA, V.N.; EL'TEKOV, Yu.A.

Adsorption of thiophene from solutions by synthetic Na and Ca faujasites. Zhur.fiz.khim. 39 no.7:1729-1732 Jl '65. (MIRA 18:8)

1. Institut khimii silikatov i Institut fizicheskoy khimii AN SSSR.

PA 24/49T14

USSR/Chemistry - Isotherms
Chemistry - Sorption

Aug 48

"The Problem of Computing the Structure of Porous Sorbents on the Basis of Sorption Isotherms," S. P. Zhdanov, State Opt Inst, 4 pp

"Dok Ak Nauk SSSR" Vol LXI, No 5

Structure of two samples of porous glass was investigated by studying the sorption and desorption of ethyl alcohol on them.

[redacted]

24/49T14

ZHDANOV, S. P.

PA 2/50T24

USSR/Chemistry - Absorption Sep 49
Colloids

"The Phenomenon of Irreversible Hysteresis of Isotherms of Water Sorption by Porous Glass and Silica Gel," S. P. Zhdanov, 4 pp

"Dok Ak Nauk SSSR" Vol LXVIII, No 1

Recorded isotherms of sorption of water vapors by porous glass and silica gel. Observed clearly defined irreversible hysteresis in every case where sorption experiment was preceded by calcination. Phenomenon was more marked, the greater the calcination temperature. Obtained an isotherm with usual limited

2/50T24

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USSR/Chemistry - Absorption Sep 49
Colloids (Contd)

hysteresis on porous glass, without preliminary roasting. Submitted by Acad I. V. Grebenshchikov 4 Jul 49

2/50T24

ZHDANOV, S. P.

USSR/Chemistry - Adsorption Jan 52

"Comparative Investigation of Structures of Porous Glasses by Adsorption Methods and the Electron Microscope," S.P. Zhdanov

"Dok Ak Nauk SSSR" Vol LXXXII, No 2, pp 281-284

Porous samples of opalescent (I) and nonpalescent (II) glass are treated with 0.5N KOH. Adsorption isotherms show an increase in the size of the pores which is verified with electron photomicrographs. II forms a rather homogeneous honeycomb structure without much change in surface while I develops irregular pores larger than in II shows no structure and exhibits considerable reduction in surface.

202T30

ZHDANOV, S. P. PA 235T18

USSR/Chemistry - Glass 21 Jul 52

"The Effect of Thermal Treatment on the Electrical Conductivity of Glasses," S.P. Zhdanov, A. Ya. Kuznetsov

"Dok Ak Nauk SSSR" Vol 85, No 3, pp 587-589

The elec cond of annealed glasses is always greater than that of calcined glasses. In sodium borosilicate glasses this is apparently due to the greater thermal stability of the Na-O-Si bond than of the Na-O-B bond and predominance of the 1st type of bonding after annealing at a high temp. The cond due to the Na-O-Si bond is greater. Presented by Acad I. V. Grebenshchikov 23 May 52.

235T18

ZHDANOV, S. P.

USSR/Chemical Technology. Chemical Products and Their Application -- Silicates.
Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 5174

Author: Zhdanov, S. P.

Institution: Academy of Sciences USSR

Title: Structure of Glass According to Data of Investigation of the Structure of Porous Glasses and Films

Original Publication: Sb. Stroyeniye stekla, M.-L., AN SSSR, 1955, 162-175

Abstract: From results of investigations of the structure of porous glasses and films conclusions are drawn concerning the structure of silicate glasses, and the existence within them of regions that differ in composition. The dimensions of these regions are especially great in sodium borosilicate glasses, reaching 70-150 A in non-opalescent glasses and 600-1,000 A in glasses in the opalescent state.

Card 1/1

ZHDANOV, S.P.

USSR/Chemical Technology. Chemical Products and their Application. Glass. Ceramics. Building Materials. J-12

Abs Jour: Referat Zh.-Kh., No 8, 1957, 27622.

Author : S.P. Zhdanov.
Inst :
Title : Chemical Stability of Borosilicate Glasses.

Orig Pub: vSb: Stroyeniye stekla. M.-L., AN SSSR, 1955, 321.

Abstract: Fritting of borosilicate glasses increases their chemical stability in consequence of the structure alteration. In hardened low-alkali glasses the aggregates of $B_2O_3$ possess relatively smaller dimensions and are connected into a single spatial structure situated within the silica skeleton. The differentiation process becomes stronger at fritting, and separate large aggregates of $B_2O_3$ are forming. In the 1st case, the molecules of the solvent pass easily into the interior, in the 2nd case, their action is limited by separate isolated aggregates. See also RZhKhim, 1956, 75659; 1957, 5174.

Card : 1/1

ZHDANOV, S.P.

ZHDANOV, S. K. P.

USSR/Chemistry - Opalescence of glass

Card 1/1 Pub. 40 - 5-27

Authors : Levin, D. I.; Zhdanov, S. K.; and Poray-Koshits, Ye. A.

Title : Structure of sodium borosilicate glass in connection with the opalescence phenonmenon. Part 1. Study of the opalescence of glass

Periodical : Izv. AN SSSR. Otd. khim. nauk 1, 31-39, Jan-Feb 1955

Abstract : The origin of opalescence in sodium borosilicate glass is discussed. A study of [illegible] diffusion [illegible]

Submitted : April 2, 1954

ZHDANOV, [illegible]

USSR/ Chemistry - Inorganic chemistry

Card 1/1 Pub. [illegible]

Authors : Zhdanov, [illegible]

Title : [illegible]

Periodical : [illegible]

Abstract : [illegible]

Institution : [illegible]

Submitted : April 2, 1954

ZHDANOV, S.P.

PORAY-KOSHITS, Ye.A.; ZHDANOV, S.P.; LEVIN, D.I.

Structure of sodium borosilicate glass and opalescence. Report no.3. Comparison of results of research on sodium borosilicate glasses and of porous products of their leaching. Izv.AN SSSR. Otd.khim.nauk no.3:395-402 My-Je '55. (MLRA 8:9)

1. Institut khimii silikatov Akademii nauk SSSR.
(Glass manufacture--Chemistry)

ZHDANOV, S.P.

USSR/ Chemistry - Physical chemistry

Card 1/[illegible] [illegible]

Authors : Zhda[illegible]

[redacted]

Title : [illegible]

Periodical : Dok. A[illegible]

Abstract : The [illegible]

Institution : [illegible]

Presented by: Academician [illegible]

Periodical : Dok. AN SSSR 100/6, [illegible]

ZHDANOV, S.P.

76-10-7/34

**AUTHORS:** Zhdanov, S.P., Kiselev, A.V.

**TITLE:** The Chemical Structure of Quartz and Silica Gel Surfaces and Their Hydration (O khimicheskom stroyenii poverkhnosti kvartsa i silikagelya i yeye gidratatsii)

**PERIODICAL:** Zhurnal Fizicheskoy Khimii, 1957, Vol. 31, Nr 10, pp. 2213-2223 (USSR)

**ABSTRACT:** Silica gel is an isomorphous body, the $SiO_4$-tetrahedrons have no spatial order, the distances between the silicon atoms are not constant in it. They can however, not differ considerably from the distance in the crystalline modifications of silicon. In order to be able to estimate approximatively the minimum amount of $\omega_{OH}$ for silica gel, data referring to the structure of one of the crystalline modifications of silicon, e.g. of the $\alpha$-quartz, can be used. Here the structure of the quartz fission surface and the silica gel surface are investigated at various states of the surface, as well as the influence of the dehydration and the hydration of the silica gel on its adsorption properties. The mean surface taken by the OH-group at the quartz- and silica gel surface in the case of a maximum hydra-

Card 1/2

The Chemical Structure of Quartz and Silica Gel Surfaces and Their Hydration 76-10-7/34

tion is determined and the number of hydroxides on the unit of this surface is computed. These quantities agree with those determined after the dehydration of the silica gel surface and the irreversible adsorption of water at it. It is shown that a dehydration of the silica gel with great pores at 650° in vacuum reduces considerably the absolute amount of the water vapor adsorption and gives a concave shape to the adsorption isotherm. It is shown that in the case of a surface dehydrated to a great extent the chemosorption of the water renews the adsorption properties of silica gel. There are 6 figures, 1 table, 15 Slavic references.

ASSOCIATION: Institute for Chemistry of Silicates, USSR Ac. of Sc.) Moscow State University imeni M.V. Lomonosov (Akademiya nauk SSSR, Institut khimii silikatov; Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova)

SUBMITTED: July 4, 1956

AVAILABLE: Library of Congress

Card 2/2

ZHDANOV, S.P.

ZHDANOV, S.P.

~~RADUSHKEVICH, L.V.~~

24(5) 13 PHASE I BOOK EXPLOITATION SOV/1408

Soveshchaniye po metodam issledovaniya struktury vysokodispersnykh i poristykh tel. 2d, Leningrad, 1956.

Metody issledovaniya struktury vysokodispersnykh i poristykh tel; trudy vtorogo soveshchaniya (Methods of Investigating the Structure of Highly Disperse and Porous Bodies; Transactions of the Second Conference) Moscow, Izd-vo AN SSSR, 1958. 294 p. 2,000 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR. Institut fizicheskoy khimii and Institut khimii silikatov.

Resp. Ed.: Dubinin, M.M., Academician; Ed. of Publishing House: Razumova, L.L.; Tech. Ed.: Markovich, S.M.

PURPOSE: This book is intended for scientists, teachers and advanced students interested in the structural analysis of highly disperse and porous bodies.

COVERAGE: This collection contains reports by members of various Soviet institutions of higher education: Institute of Physical Chemistry, AS UkrSSR; Institute of Chemistry, AS Georgian SSR; Far Eastern Branch, AS USSR; Georgian Scientific Research Institute for Petroleum; State Optical Institute; Leningrad Technological Institute; Moscow and Leningrad State Universities; Far Eastern Polytechnic Institute; "Agrophysical" Institute, and others. Introductory remarks were made by Professor N.A. Toropov, Director of the Institute of Silicate Chemistry. Apart from reports under the four subject divisions (see Table of Contents), the collection includes discussions, considerations and proposals adopted at the close of the conference.

TABLE OF CONTENTS:

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II. Applications of the Adsorption Method 95

Dubinin, M.M. (Institute of Physical Chemistry, AS USSR). Methods of Calculating Statistical Volume and Surface Distribution of Sorbent Pores Based on Sorption Measurements.

Zhdanov, S.P. (Institute of Silicate Chemistry, AS USSR) Application of the Adsorption Method for Investigating Etching Structures in Porous Glass 107

Neymark, I.Ye., R.Yu. Sheynfayn, and L.G. Svintsova (Institut fizicheskoy khimii imeni L.V. Pisarzhevskogo AN UkrSSR-Institute of Physical Chemistry imeni L.V. Pisarzhevskiy, AS UkrSSR) The Nature of Shape Changes in Sorption Isotherms of Various Vapors on Fluorinated Silica Gels 117

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Zhdanov, S.P., and Ye.A. Porai-Koshits. Comparison of Results Obtained From an Investigation of Porous Glass Structures by Small-angle X-ray Methods

Discussion (by contributing authors; N.M. Kamakin and Ya.V. Mirskiy, Groznenskiy neftyanoy nauchno-issledovatel'skiy institut- Groznyy Scientific Research Institute for Petroleum; Yu.A. El'tekov, Institut organicheskoy khimii imeni N.D. Zelinskogo AN SSSR-Institute of Organic Chemistry imeni N.D. Zelinskiy, AS USSR; and M.P. [illegible], Moskovskiy inzhenerno-fizicheskiy institut-Moscow Physics and Engineering Institut) 130